

Considerations in Planning for Research, Education and Extension Programs in Obesity Prevention

Susan Welsh, PhD, RD and Etta Saltos, PhD, RD National Institute of Food and Agriculture 2/2/11

Considerations in Planning for the Future

- Farm Bill Authorizations, 2008
- Strategic Plans in nutrition from USDA and HHS
- Seminal Reports
 - New Biology, 2009
 - Healthy People 2020, released 12/2/10
 - Dietary Guidelines 2010, released 1/31/11
- Congressional Appropriations, annual budgets
- Funding Opportunities
- New Technology

Food, Conservation and Energy Act of 2008 (Farm Bill)

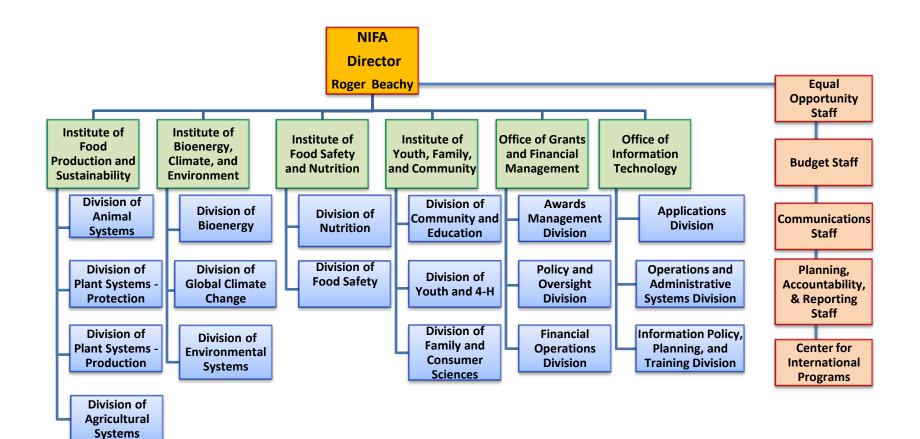
- Creation of National Institute of Food and Agriculture (NIFA)
 - Oct. 1, 2009
- Creation of Agriculture and Food Research Initiative (AFRI), which supersedes National Research Initiative (NRI) and Initiative for Future Agriculture and Food Systems (IFAFS)



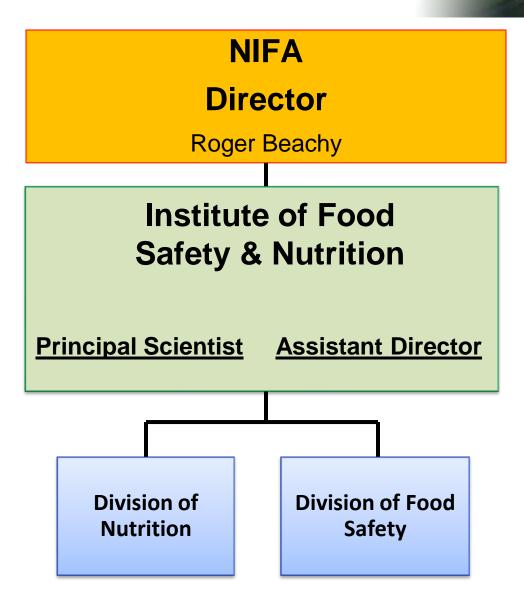
2008 Farm Bill Authorizes NIFA Research, Education and Extension in 6 Priority Areas

- A) Plant health and production and plant products;
- B) Animal health and production and animal products;
- C) Food safety, nutrition, and health;
- D) Renewable energy, natural resources, and environment;
- E) Agriculture systems and technology; and
- F) Agriculture economics and rural communities.

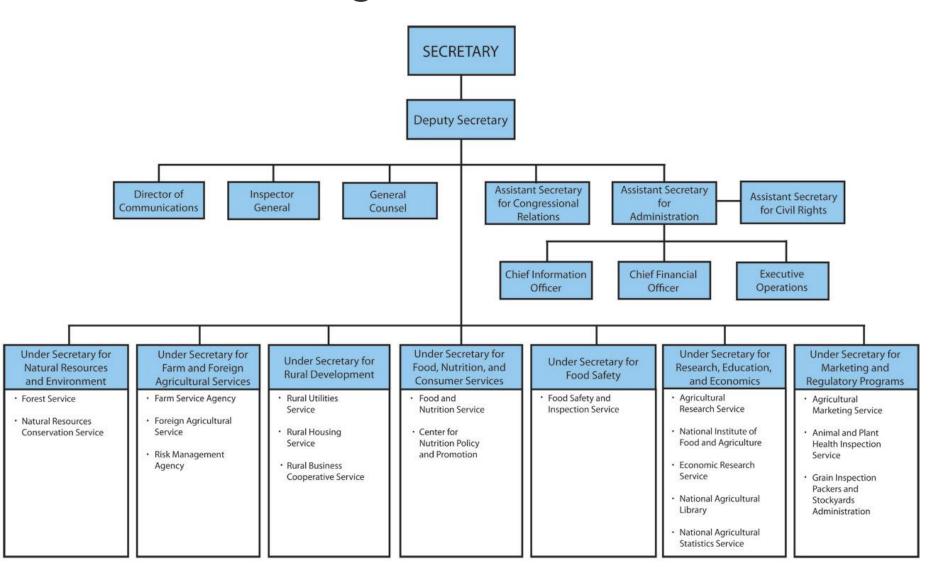






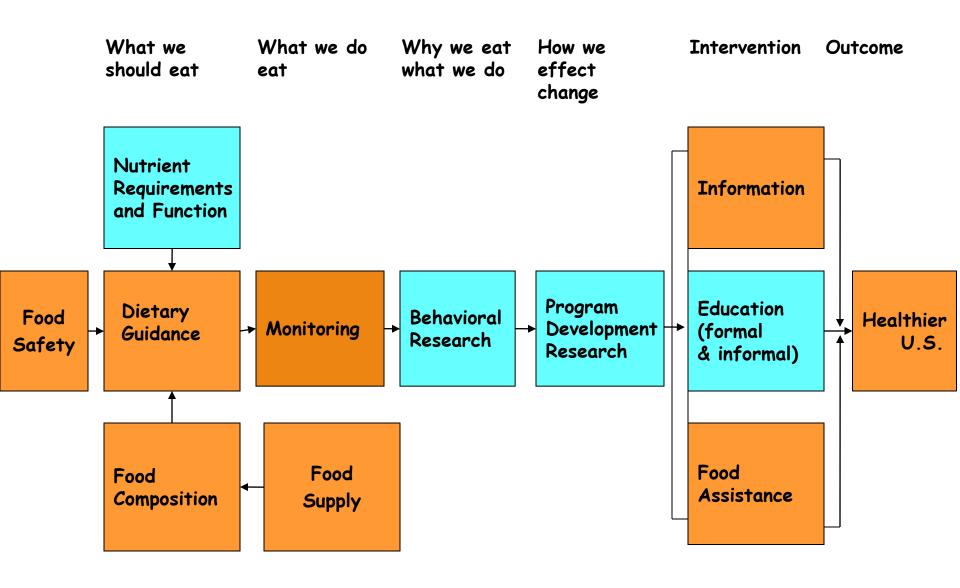


USDA Organizational Structure



Key USDA, NIFA and IFSN Leaders

- Tom Vilsak Secretary of Agriculture
- Dr. Kathleen Merrigan Deputy Secretary of Agriculture
- Dr. Cathie Woteki, Under Secretary for Research, Education and Economics
- Dr. Roger Beachy Director of NIFA
- Dr. Ralph Otto Associate Director of NIFA
- Open Principal Scientist, NIFA, Institute of Food Science and Nutrition (IFSN)
- Open Assistant Director, NIFA, Institute of Food Science and Nutrition (ISFN)



USDA Activities leading to a Healthier U.S. NIFA activities in blue



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NIFA: Strategic Plan, 2007-2012 Goals

- Enhance international competitiveness of American agriculture
- Enhance the competitiveness and sustainability of rural and farm economies
- 3. Support increased economic opportunities and improved quality of life in rural America
- 4. Enhance protection and safety of the nation's agriculture and food supply
- 5. Improve the nation's nutrition and health
- Protect and enhance the nation's natural resource base and environment





Strategic Plans for Obesity Research 2011

NIH – To be released soon

USDA - In development

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New Biology for the 21st Century: Ensuring the United States Leads the Coming Revolution, NRC, 2009 http://www.nap.edu/catalog.php?record_id=12764

Named four societal challenges:

- 1) Generate food plants to adapt and grow sustainably in changing environments
- 2) Understand and sustain ecosystem function and biodiversity in the face of rapid change
- 3) Expand sustainable alternatives to fossil fuels
- 4) Understand individual health

Healthy People 2020 – Nutrition and Weight Status (NWS) and Physical Activity (PA)

- 22 Major NWS Objectives and 14 PA Objectives
 - Target
 - Baseline
 - Target Setting Method (default 10% improvement)
 - Data Source

http://www.healthypeople.gov/2020/default.aspx

Healthy People 2020 – Nutrition and Weight Status (NWS): *Health Care and Worksite Settings*

NWS-4: (Developmental) Increase the proportion of Americans who have access to a food retail outlet that sells a variety of foods that are encouraged by the *Dietary Guidelines for Americans.*

- NWS-5: Increase the proportion of primary care physicians who regularly measure the body mass index of their patients.
- NWS-6: Increase the proportion of physician office visits that include counseling or education related to nutrition or weight.
- NWS-7: (Developmental) Increase the proportion of worksites that offer nutrition or weight management classes or counseling.



Healthy People 2020 – Nutrition and Weight Status (NWS): Weight Status

NWS-8: Increase the proportion of adults who are at a healthy weight.

NWS-9: Reduce the proportion of adults who are obese.

NWS-10 Reduce the proportion of children and adolescents who are considered obese.

NWS-11: (Developmental) Prevent inappropriate weight gain in youth and adults.

Healthy People 2020 – Nutrition and Weight Status (NWS): Food and Nutrient Consumption (1)

NWS-14: Increase the contribution of fruits to the diets of the population aged 2 years and older.

NWS-15: Increase the variety and contribution of vegetables to the diets of the population aged 2 years and older.

NWS-16 Increase the contribution of whole grains to the diets of the population aged 2 years and older.

NWS–17: Reduce consumption of calories from solid fats and added sugars in the population aged 2 years and older.

Healthy People 2020 – Nutrition and Weight Status (NWS): Food and Nutrient Consumption (2)

NWS–18: Reduce consumption of saturated fat in the population aged 2 years and older.

NWS-19: Reduce consumption of sodium in the population aged 2 years and older.

NWS-20: Increase consumption of calcium in the population aged 2 years and older.

NWS–21: Reduce iron deficiency among young children and females of childbearing age.

NWS-22: Reduce iron deficiency among pregnant females.

Healthy People 2020 – Physical Activity (PA)

- PA-1 Reduce the proportion of adults who engage in no leisure time activity
- PA-2 Increase the proportion of adults who meet current Federal physical activity guidelines for aerobic physical activity and for muscle-strengthening activity
- PA-3 Increase the proportion of adolescents who meet current Federal physical activity guidelines for aerobic physical activity and for muscle-strengthening activity
- PA-4 Increase the proportion of the Nation's public and private schools that require daily physical education for all students
- PA-5 Increase the proportion of adolescents who engage in daily school physical education
- PA-6 Increase regularly scheduled elementary school recess in the United States
- PA-7 Increase the proportion of school districts that require or recommend elementary school recess for an appropriate period of time

Healthy People 2020 – Physical Activity (PA)

- PA-8 Increase the proportion of children and adolescents who do not exceed recommended limits for screen time
- PA-9 Increase the number of States with licensing regulations for physical activity provided in child care
- PA-10 Increase the proportion of adolescents who meet current Federal physical activity guidelines for aerobic physical activity and for muscle-strengthening activity
- PA-11 Increase the proportion of physician office visits that include counseling or education related to physical activity
- PA 12 (Developmental) Increase the proportion of employed adults who have access to and participate in employer-based exercise facilities and exercise programs
- PA-13 (Developmental) Increase the proportion of trips made by walking
- PA-14 (Developmental) Increase the proportion of trips made by bicycling

Dietary Guidelines for Americans (DGA) History

- Provide advice on food choices that promote good health, healthy weight and help prevent disease
- Are the basis of Federal nutrition policy and therefore all Federal dietary guidance
- Released by USDA and HHS every 5 yrs since 1980
- 2011 Guidelines released 1/31/2011
 http://www.cnpp.usda.gov/DGAs2010-PolicyDocument.htm
- Based on the Dietary Guidelines Advisory Committee Report, an external 13 member scientific Committee http://www.cnpp.usda.gov/DGAs2010-DGACReport.htm

Some Differences between 2010 and 2005 DGA

- Used the new USDA Nutrition Evidence Library http://www.nutritionevidencelibrary.com/
- Focus on
 - Maintaining calorie balance to achieve /sustain healthy weight and meeting the 2008 Physical Activity Guidelines for Americans
 - Consuming nutrient dense foods
 - Proper nutrition for children
- Chapter on health promoting dietary patterns USDA Food Patterns and vegetarian option and HHS DASH Eating Plan
- Chapter on needed environmental and societal changes



DGA Foods and Food Components to Reduce

- Reduce daily sodium intake to <2,300 mg and for some groups <1,500 mg per day
- Consume <10% of calories from saturated fatty acids;
 replace with mono or poly unsaturated acids
- Consume <300mg/ day of cholesterol
- Keep trans fatty acid intake as low as possible
- Reduce the intake of calories from solid fats and added sugars
- Limit intake of foods that contain refined grains
- If alcohol is consumed, it should be in moderation

DGA Foods and Food Components to Increase (1)

- Increase vegetable and fruit intake
- Eat a variety of vegetables, esp. dark-green, red and orange vegetables and beans and peas
- Consume at least half of all grains as whole grains, replace refined with whole grains
- Increase intake of fat-free or low-fat milk and milk products or fortified soy beverages
- Choose foods that provide more potassium, dietary fiber, calcium, and vitamin D

DGA Foods and Food Components to Increase (2)

- Choose a variety of protein foods including seafood, lean meat and poultry, eggs, beans and peas, soy products, and unsalted nuts and seeds
- Increase the amount of seafood to 8 oz per week by replacing some meat and poultry
- Replace protein foods that are higher in solid fats and calories with choices that are lower and/or sources of oil
- Use oils to replace solid fats where possible



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NIFA Annual Budget for Nutrition

- FY 2010
 - Total: \$139 million (includes Hatch funded projects and earmarks)
 - EFNEP: \$68 million
 - AFRI Competitive Grants Program: \$25 million
- FY 2011 ???

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Agriculture and Food Research Initiative (AFRI) Competitive Grants Program

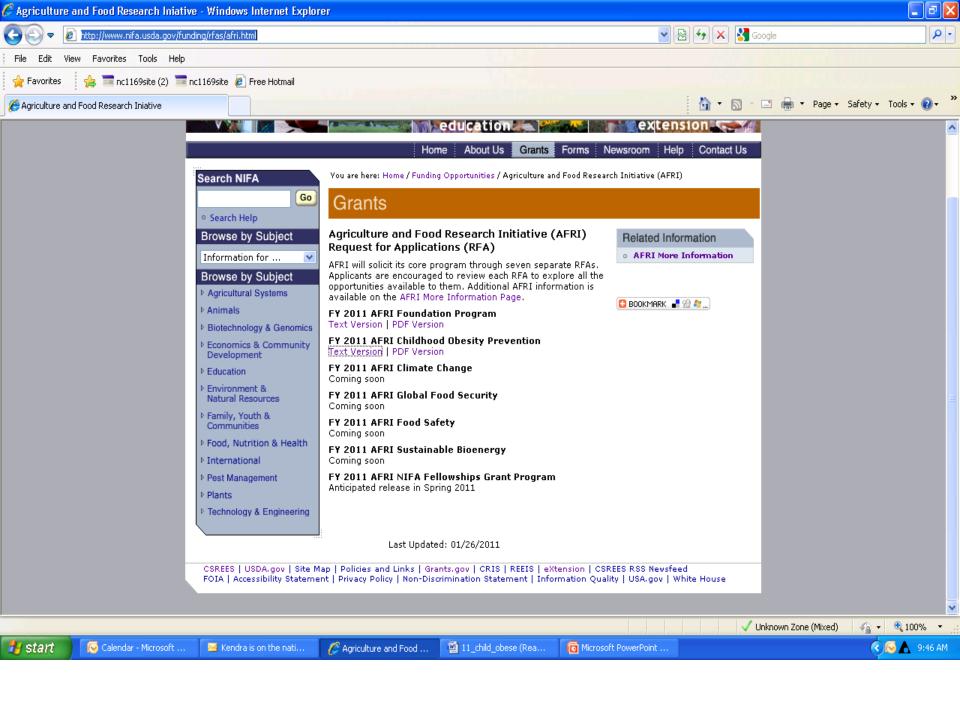
http://www.nifa.usda.gov/funding/rfas/afri_rfa.html.

NIFA's primary competitive grants program

Authorized by the 2008 Farm Bill

Run for the first time 2009

Based on the "New Biology" 2010





AFRI Foundational Program RFA 2011

released1/7/11

http://nifa.usda.gov/funding/rfas/pdfs/11_afri_foundationaL_final_1-7-11.pdf

Focuses on building a foundation of knowledge in fundamental and applied food and agricultural sciences critical for solving societal challenges.

- Biology of Agricultural Plants
- Animal Health and Production and Animal Products
- Food Safety, Nutrition, and Health
- Renewable Energy, Natural Resources, and Environment
- Agriculture Systems and Technology
- Agriculture Economics and Rural Communities



AFRI Foundational Program RFA 2011 Subsection on Food Safety, Nutrition, and Health

Letter of Intent Deadline – February 28, 2011

Application Deadline – May 2, 2011 (5:00 p.m. ET)

Total Program Funds – Approximately \$11 million

Proposed Budgets – not to exceeding \$500,000 for up to 5 years

Program Area Priorities –

- Physical and Molecular Mechanisms of Food Contamination
- Function and Efficacy of Nutrients A1341, Dionne Toombs
 Improve function and efficacy of nutrients and/or other dietary bioactive components in promoting health. Focus on their role in preventing inflammation or promoting gastrointestinal health.
- Improved Processing Technologies



AFRI Challenge Area Childhood Obesity Prevention 2011 RFA

http://www.nifa.usda.gov/funding/rfas/afri.html

Childhood Obesity Prevention RFA Types of <u>Proposals</u>

- Standard Grants
- Conference Grants (not exceeding \$50,000)
- Food and Agricultural Science Enhancement (FASE)
 - New Investigator Awards
 - "Strengthening" Awards
 - Standard Strengthening Grants
 - Seed Grants (up to \$150,00 for 2 yrs)
 - Equipment Grants (NIFA funding up to 50% or \$50,000)
 - Sabbatical Grants (up to 1yr of salary and funds for travel and supplies)



Food and Agricultural Science (FASE) Award Eligibility

- New investigators less than 5 years in career track
- Strengthening Grants
 - Experimental Program for Stimulating Competitive Research (EPSCoR) state (no higher than the 38th percentile of all States in grants), or
 - State Agricultural Experiment Stations or degree-granting institutions, and
 - small and mid-sized (17,500 or less) or minority-serving (enrollment of minorities exceeds 50%), and
 - not among the most successful for receiving Federal funds for research

Challenge Area – Childhood Obesity Prevention Overview

- Obesity is the number one nutrition problem in U.S.
- Overweight and obesity rates in children have tripled in past 30 years (CDC)
- U.S. food supply contains many foods high in energy and low in nutrients
- USDA has unique responsibility for the food system in the U.S.

Differences Between 2011 and 2010 RFA for Childhood Obesity Prevention

- 2011 RFA is only for integrated projects whereas the 2010 RFA included single function research, education and extension projects and Coordinated Agricultural Projects (CAP)
- Target population for 2011 is 9-14 yrs. It is acceptable to cover only part of this age range or for children to age into or out of the range
- In 2010 the target population was 2-8 yrs and in 2012 it will be 15-19 yrs

Program Priority: <u>Integrated</u> Research, Education, and Extension to Prevent Childhood Obesity

- Generate new knowledge about behavioral (not metabolic) factors that influence childhood obesity <u>and</u>
- Use this information to develop and implement effective family and/or school-based interventions for preventing overweight and obesity in children 9-14 years of age
- Behavior should be defined in a broad sense to include individual patterns of behavior and how individuals respond to others and the environment



2011 RFA Information: Childhood Obesity Prevention

- Application Deadline May 18, 2011 (5pm ET)
- Letter of Intent None required
- Budget Requests
 - Should not exceed \$500,000/yr for up to 5 years (\$2.5M total);
 requests exceeding the limit will not be reviewed
 - Awards made on a continuation basis (annual funding based on progress)
 - Program anticipates making up to 17 awards
- Requested Project Type <u>Integrated Projects</u>
- Requested Grant Types Standard, Conference, and FASE Grants
- Program Area Contact Dr. Etta Saltos (202-401-5178 or esaltos@nifa.usda.gov)



2011 RFA Other Program Requirements: Childhood Obesity Prevention

- Projects are expected to lead to measurable, documented changes in learning, actions or conditions in relation to obesity prevention
- Because obesity is such a multifaceted problem, it is expected that the project team will have appropriate training and experience in multiple disciplines. <u>Nutrition expertise is essential</u>
- High priority will be given to projects involving populations eligible for USDA programs e.g., EFNEP, School Meals programs
- All projects should address some aspect of food consumption
- Applications that involve multiple institutions are strongly encouraged, esp. applications with and from Minority Serving Institutions
- It is understood that some projects may require the development and testing of new assessment tools
- Applications addressing interventions for weight loss or that target audiences other than children ages 9-14 years will not be reviewed



General Proposal Evaluation Criteria

- Relevance
 - Meets program priorities
 - Stakeholder needs addressed
 - Each component is necessary for success of project
- Merit
 - Objectives and outcomes clearly described
 - Innovative, original, suitable, feasible
 - Expected outcomes clear, measurable, achievable
 - Research component fills knowledge gaps
 - Extension component leads to measurable changes in learning, actions, conditions
 - Education component strengthens institutional capacity

General Proposal Evaluation Criteria, cont.

- Qualifications of project personnel, adequacy of facilities, and project management
 - Experience and competence of key personnel
 - Adequacy of facilities
 - Planning and administration
 - Partnerships with other disciplines/institutions are established

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www.nccor.org/css.html Live now; official launch on 2/4/11

Catalogue of Surveillance Systems

- Produced by NCCOR (National Collaborative on Childhood Obesity Research)
- Web tool providing a catalogue of surveillance systems that contain data relevant to childhood obesity research.
- 76 systems
 - Website
 - Purpose
 - Target population
 - Design
 - Key variables
 - Data access and cost
 - Selected publications





NCCOR Measures Registry

- Produced by the NCCOR
- Web-based registry of valid and reliable measures to assess independent, dependent and key moderating variables in childhood obesity prevention research
 - Evaluated based on the degree to which they are valid, culturally sensitive and feasible for administration and use by a variety of endusers
 - 4 Domains of measures
 - Physical activity environments and policies
 - Food environments and policies
 - Individual dietary behaviors
 - Individual physical activity behaviors (including sedentary)





About eXtension Families Food an Fitness

http://www.extension.org/pages/Families_Food_and_Fitness_Community_Page

Vision - to become a source of research-based information for families as they work to:

- eat smart
- move more, and
- achieve a healthy weight

Focus – Key behaviors associated with healthy weight:

- Move More Everyday
- Tame the Tube
- Control Portion Size
- Enjoy More Fruits and Vegetables
- Prepare more meals at home
- Enjoy More Fruits and Vegetables
- Re-Think Your Drink





Current Applications

- Interactive Tools
- Recipe Bank
- Glossary Terms
- Instructional Videos
- Articles
- FAQs and "Ask An Expert"
- Online Chats
- "In the News" articles



BEST WISHES!

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2/2/11